

REMARKS

Claims 1-26 remain pending. Claims 21, 22, and 25 stand withdrawn from consideration following the election of Group I, claims 1-20, 23, 24, and 26, for prosecution on the merits. Applicants note with appreciation that the Office Action indicates that Group II claims, which depend from Group I claims, will be rejoined upon allowance of the elected Group I claims.

Claims 1-20, 23, 24 and 26 stand rejected under 35 U.S.C. § 102(b) as being anticipated by, or in alternative, under 35 U.S.C. § 103(a) as obvious over EP 838,501 ("EP '501"). Claims 1-20, 23, 24 and 26 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over EP '501 in view of Brydson, *Plastic Materials* at page 590.

EP '501 discloses a modified polyester composition that is said to have improved impact resistance. The modifier includes an ethylene acrylate co-polymer or an ethylene alkyl methacrylate co-polymer, and a ter-polymer selected from ethylene/alkyl acrylate/glycidyl methacrylate; ethylene/alkyl acrylate/glycidyl acrylate; ethylene/alkyl methacrylate/glycidyl acrylate; and ethylene/alkyl methacrylate/glycidyl methacrylate (page 2, lines 39-44). The composition preferably includes fiberglass as a reinforcing agent and may also contain a flame retardant (page 5, lines 12-54). The compositions are said to be useful in automobile panels, automobile parts, industrial plumbing, and construction parts (page 6, lines 4-5). The composition is extruded and pelletized, and parts are formed by injection molding the pelletized extrudate (page 6, lines 33-34).

The Office Action asserts that the high heat deflection temperatures and good mechanical properties of the examples in EP '501 somehow indicate that the compositions inherently have a crystallinity of at least 15%. The Office Action indicates that the Patel Declaration is not considered persuasive because the samples described therein are amorphous whereas the

compositions in Table 2 of EP '501 are allegedly not amorphous. This wholly unsupported assertion is in direct conflict with the record evidence.

Patel declares that "compositions [A and C] were prepared essentially as set forth in the last two entries of Table 2 (page 8) of EP '501." (Patel Dec. ¶ 3)(emphasis added). Patel further reports that these injection molded samples were "virtually amorphous." (Patel Dec. ¶7). The samples described in the Patel declaration, therefore, are representative of the last two entries of Table 2 of EP '501. There is no basis whatever to conclude that the compositions in Table 2 of EP '501 are not "virtually amorphous" like samples A and C of the Patel Declaration, which were "prepared essentially as set forth" in EP '501.

The heat deflection and mechanical properties reported in Table 2 of EP '501 are consistent with the data reported in the Patel declaration for "virtually amorphous" samples A and C which (like the last two entries in Table 2 of EP '501) contained reinforcing fillers. The Patel Declaration squarely rebuts the Office Action's assertion that the heat deflection and mechanical properties reported in Table 2 of EP '501 are attributable – let alone *necessarily* attributable – to thermal crystallinity levels of at least 15%.

The record demonstrates that the cited EP '501 compositions (Table 2, last two entries) do not have a degree of thermally induced crystallinity of at least about 15%, as claimed in independent claims 1, 20, and 26. Moreover, the cited EP '501 compositions exhibit shrinkage (do not maintain dimensional stability) at 212°F in the absence of reinforcing fillers (Patel Dec. ¶9). In addition, the cited EP '501 compositions exhibit heat distortion (do not maintain dimensional stability) at temperatures of 250-400°F, e.g., temperatures typically encountered in cooking applications, even with reinforcing fillers (Patel Dec. ¶10). Accordingly, the present

record demonstrates that EP '501 neither discloses nor suggests the composition of independent claims 1, 20, or 26.

The Office Action notes that the Patel declaration does not contain a comparison with polybutylene terephthalate (PBT), as shown in Table 4 of EP '501. However, independent claims 1, 20, and 26 specify a bulk polymer selected from PET, PEN, PETG, PCT, PCTA, PTT, and mixtures thereof. Any comparisons involving PBT, which is not among this group, would be irrelevant.

Brydson is cited as describing the use of nucleating agents in injection molded PET. This (1975) publication states that injection molded PET "is transparent and amorphous and of little value" because it undergoes distortion, shrinkage and clouding when heated above 80°C. Brydson discloses that nucleating agents have been used to develop semi-finished products such as rod and pipe by a continuous casting process. Such products are said to exhibit high hardness, creep resistance, and rigidity, but suffer from the disadvantage of sensitivity to hot water and alkaline solutions (sentence bridging pages 590-591).

Brydson's remark in 1975 that amorphous, injection molded PET is "of little value" obviously is not true today. Various types of modern packaging, such as water bottles or squeeze bottles used for ketchup or other condiments, are formed by injection molding PET and are both transparent and amorphous. Other approaches, as in EP '501, have been to incorporate additives into PET compositions to modify properties of the resulting injection molded (amorphous) products.

No motivation exists to combine EP '501 and Brydson in the manner proposed in the Office Action. The injection molded, modified polyester compositions described in EP '501, which are virtually amorphous (see Patel declaration), are disclosed as being useful in

automobile panels, automobile parts, industrial plumbing, and construction parts. Brydson and EP'501 take different approaches to modify the properties of injection molded PET. It is implausible to conclude that the EP '501 compositions would be "of little value" without the use of a nucleating agent, as the Office Action apparently suggests. Although EP '501 mentions that nucleating agents may be used, EP '501 does not indicate that the use of nucleating agents is needed to obtain the stated physical properties.

More significantly, no evidence is cited that even if the references were somehow combined, the resulting composition would have a level of thermal crystallinity of at least 15%, as set forth in claims 1, 20, and 26, let alone possess the dimensional stability-at-temperature properties as specified in the claims. Accordingly, Applicant respectfully submits the Office Action has failed to set forth a *prima facie* case of unpatentability.

Neither EP '501 nor Brydson, taken alone or in combination, discloses or suggests the invention of independent claim 1. Independent claims 20 and 26 recite that the thermoplastic composition is food-grade. The modified polyester compositions of EP '501, which typically include fibrous reinforcing agents and flame-retardants, are said to be intended for such uses as automotive parts and industrial plumbing. EP '501 clearly is not concerned with preparing food grade compositions, nor does the document provide any teaching, motivation, or suggestion as to how the compositions could be modified to prepare food grade compositions.

The dependent claims, 2-19 and 21-25, are allowable for at least the same reasons that the independent claims from which they depend are allowable. Reconsideration and allowance of the §§102 and 103 rejections over EP '501 and Brydson are respectfully requested.

Claims 1-20, 23, 24 and 26 stand rejected under 35 U.S.C. § 102(b) as being anticipated by, or in alternative, under 35 U.S.C. § 103(a) as obvious over JP 1,247,454 ("JP '454"), optionally in view of Brydson.

JP '454 is cited as describing modified compositions of polybutylene terephthalate (PBT). The Office Action criticizes the Patel declaration as not containing data for polybutylene terephthalate (PBT). However, independent claims 1, 20, or 26 specify a bulk polymer selected from PET, PEN, PETG, PCT, PCTA, PTT, and mixtures thereof. JP '454 fails to describe a composition containing any of the claimed bulk polymers and, at least for this reason, fails to describe or suggest the claimed thermoplastic composition. Any comparisons involving PBT, as proposed in the Office Action, would be irrelevant.

Brydson is cited as describing nucleating agents. Brydson fails to describe or suggest the claimed compositions and, in any event, fails to remedy the deficiencies of JP '454 as discussed above. Neither JP '454 nor Brydson, taken alone or in combination, discloses or suggests the invention of independent claims 1, 20, and 26. The dependent claims, 2-19 and 21-25, are allowable for at least the same reasons that the independent claims from which they depend are allowable. Reconsideration and withdrawal of the §§ 102 and 103 rejections over JP '454 and Brydson are respectfully requested.

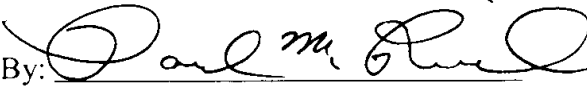
The Examiner is cordially invited to telephone the undersigned at the number listed below if she believes doing so would be helpful to resolve any outstanding matters.

Respectfully submitted,

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